**21126**

Electronic control with 8 inputs, 7 outputs, 3 modules.

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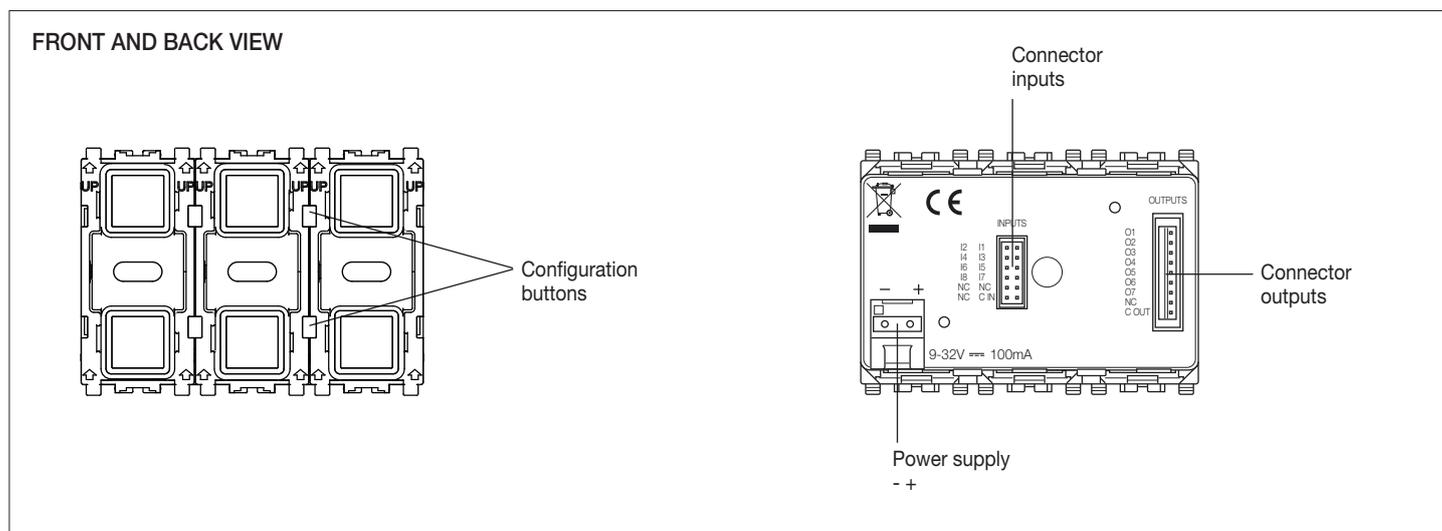
General description - Characteristics - Connections

1. General description

Electronic control with 6 independent pushbuttons, 8 non-polarised inputs, 7 solid state outputs for non-polarised contacts, configurable RGB LED backlighting, 9-32 Vdc power supply, to be completed with Eikon Tactil labels and cover plate - 3 modules.

2. Characteristics

- Supply voltage: 9-32 Vdc SELV (insulated with double insulation on the power supply network)
- Max absorbed power in power supply input: 0.7 W
- Inputs:
 - Input activation voltage: 5-32 Vdc
 - Input activation current: 0.7-5.5 mA (according to input supply voltage)
 - Signal frequency PWM input 7: 400 kHz (if you wish to change the current colour settings of the LEDs)
- Outputs:
 - Voltage that can be controlled by the outputs: 40 V
 - Current that can be controlled by each individual output: 100 mA

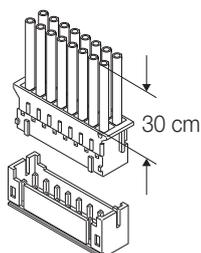


3. Connections

N.B. The conductors of the inputs and outputs can be extended up to at most 50 m (minimum section 0.33 mm²).

3.1 Inputs

The inputs connector is of the type JST PHDR-12VS.



These are live inputs (they can be controlled directly using the supply voltage) and are all referred to the common contact of pin 11.

The inputs are non-polarised and can be activated with positive or negative currents, and therefore by push-pull, open collector, open-emitter or voltage-free contacts.

Connections

- Wiring.

Input 2 (Pink) Lower left pushbutton LED	2	1	Input 1 (Orange) Upper left pushbutton LED
Input 4 (Brown) Lower centre pushbutton LED	4	3	Input 3 (Green) Upper centre pushbutton LED
Input 6 (Black) Lower right pushbutton LED	6	5	Input 5 (Purple) Upper right pushbutton LED
Input 8 (Grey) Select with or without feedback mode	8	7	Input 7 (White) Colour of all LEDs in the device
Input 10 (Blue) Do not connect	10	9	Input 9 (Red) Do not connect
Pin 12 (Yellow) Do not connect	12	11	Pin 11 (White/Red) Inputs common

Input 7 can be in PWM and this makes it possible to set the colours of all the LEDs of the device (see the paragraph "LED Configuration").

3.1.1 Input connection

The inputs are not polarised and are isolated from the device's supply voltage by functional isolation (non-reinforced); this allows the connection of input signals with reference voltages that differ from the supply voltage of the 21126 control, provided they have SELV power supplies.

A PWM signal can be connected to input 7.

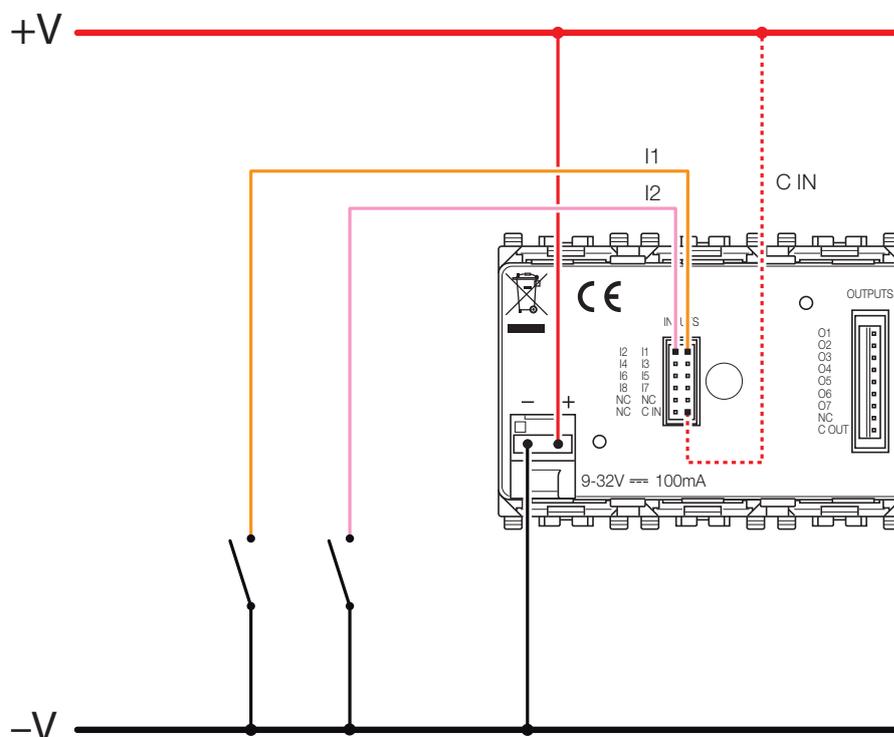
Illustrated below are two examples of the wiring layouts that can be achieved.

Example 1: Connection via contacts that close to the power supply negative (-) (most frequently used case).

The inputs can be connected to the device's power supply negative (-) by means of a switch.

Open collector outputs of a third-party device can be used as switches (provided it is checked beforehand that these outputs have appropriate maximum voltage and current values).

The inputs common is to be connected directly to the power supply positive (+).

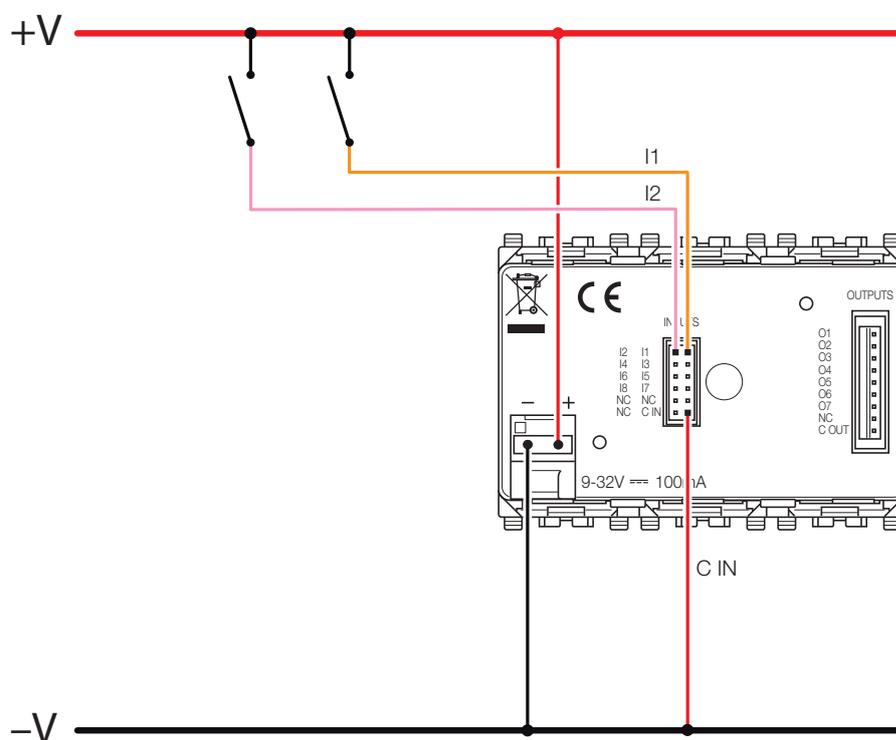


Connections

Example 2: Connection via contacts that close to the power supply positive (+) (the opposite to the previous example).

The inputs can be connected to the device's power supply positive (+) by means of a switch.

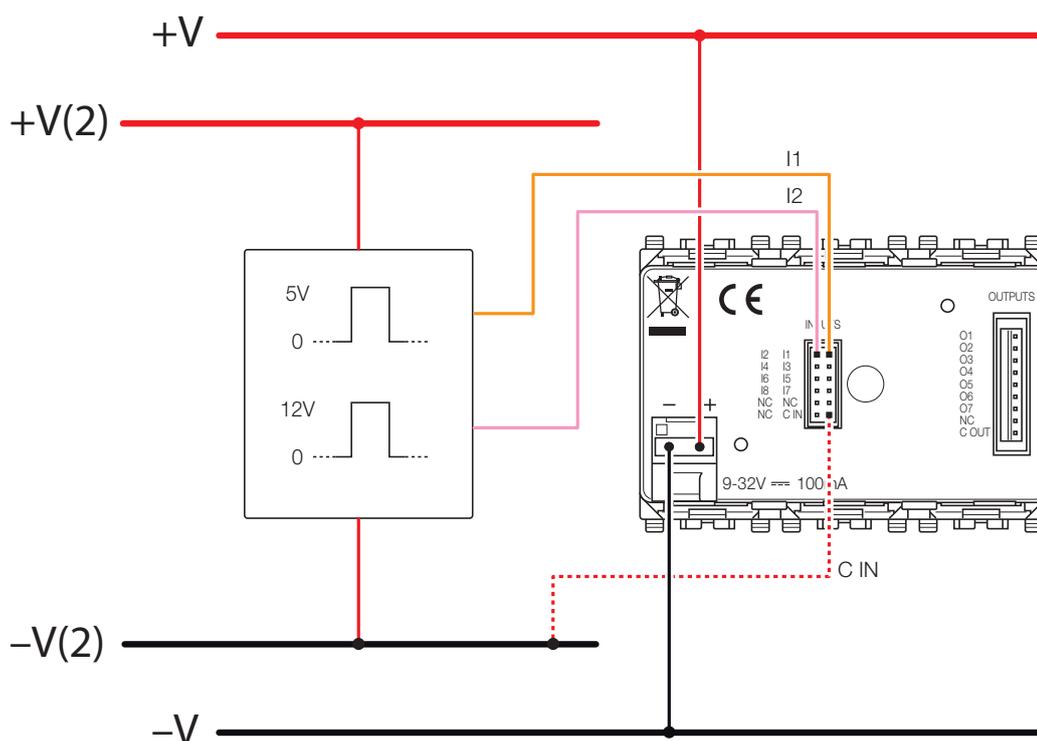
The inputs common is to be connected directly to the power supply negative (-).



Example 3: Connection with a signal generator with different voltage references.

The inputs can be connected directly to a third-party device that provides an output with voltage and current values compatible with the inputs of the 21126 control.

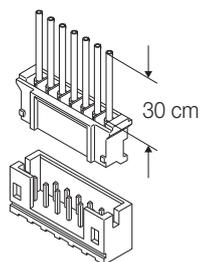
The inputs common is to be connected directly to the negative (-) of the power supply of the third-party device.



Connections

3.2 Outputs

The outputs connector is of the type JST PHR-9.



The outputs are non-polarised solid state (volt-free contact) and are all referred to the common on pin 9.

The outputs can be used to control signals but are not suitable for controlling loads (for example, three coils of large relays or contactors, high-power LED lights, etc.).

- Wiring.

1	Output 1 (Orange) Upper left pushbutton
2	Output 2 (Yellow) Lower left pushbutton
3	Output 3 (Green) Upper centre pushbutton
4	Output 4 (Blue) Lower centre pushbutton
5	Output 5 (Purple) Upper right pushbutton
6	Output 6 (Grey) Lower right pushbutton
7	Output 7 (White) Proximity sensor
8	Output 8 (Black) Do not connect
C	Pin C (Red) Outputs common

Output 7 activates when the proximity sensor is tripped.

Connections

3.2.1 Output connection

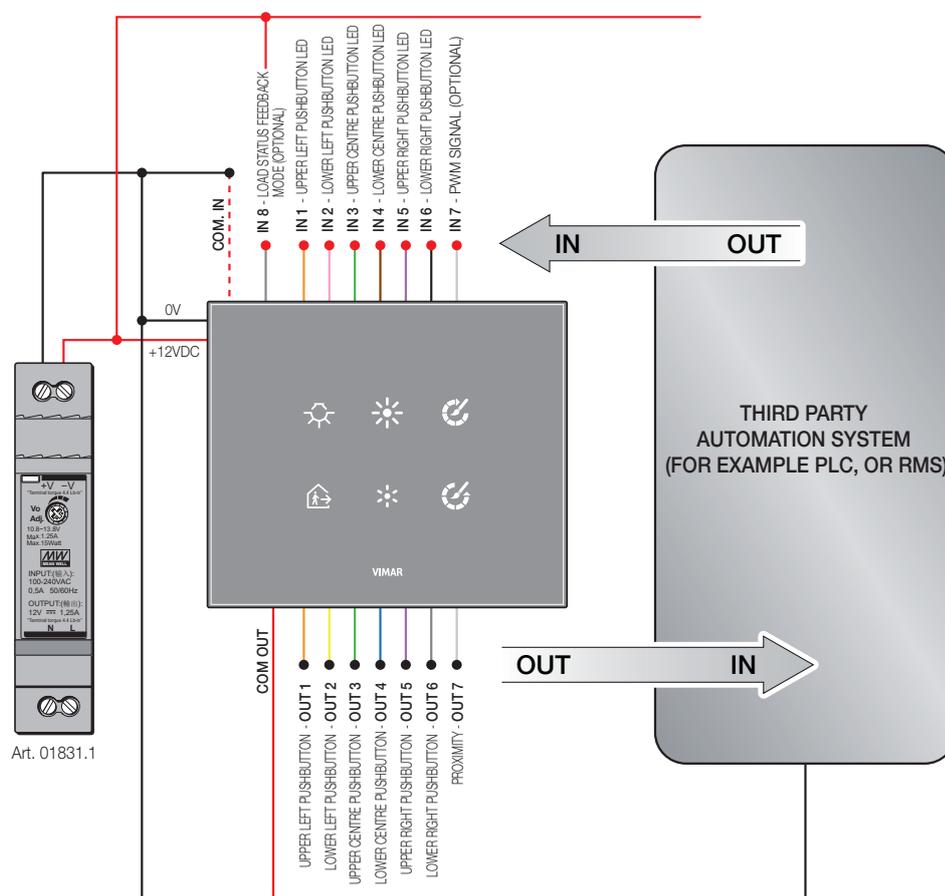
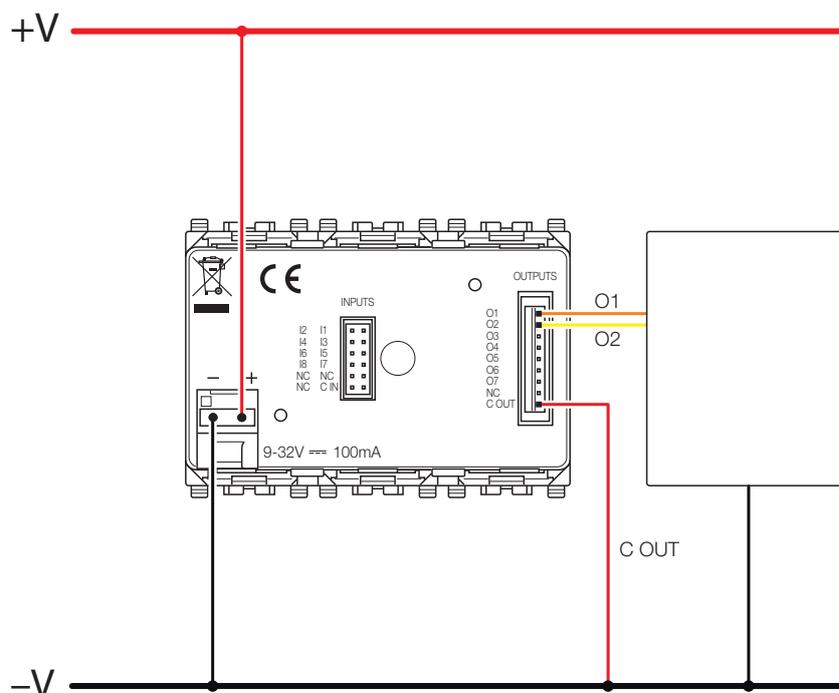
The outputs are not polarised and are isolated from the device's supply voltage by functional isolation (non-reinforced); this allows the connection of output signals with reference voltages that differ from the supply voltage of the 21126 control, provided they have SELV power supplies.

Illustrated below are two examples of the wiring layouts that can be achieved.

Example 1: Connection with output contacts that close to the power supply negative (-) (most frequently used case).

The outputs can be connected to a third-party device with internal pull-up inputs.

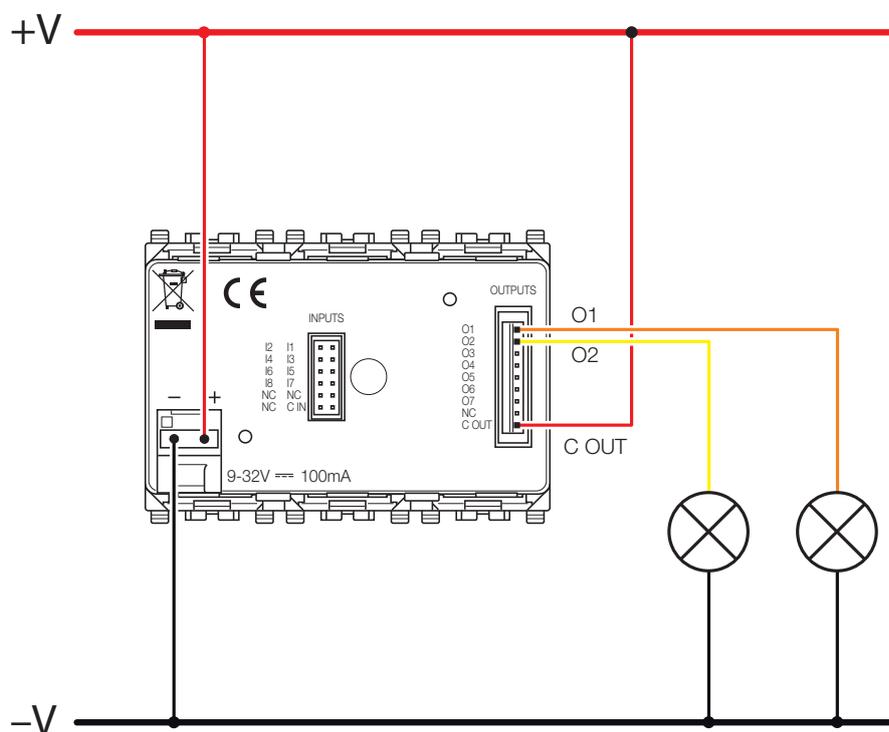
The outputs common is to be connected directly to the power supply negative (+).



Connections

Example 2: Connection of small indicator lights.

The outputs can be connected to indicator lights with characteristics compatible with the maximum voltage and current values of the 21126 control. The outputs common is to be connected directly to the power supply positive (+).



RGB LEDs and pushbuttons

4. RGB LEDs and pushbuttons

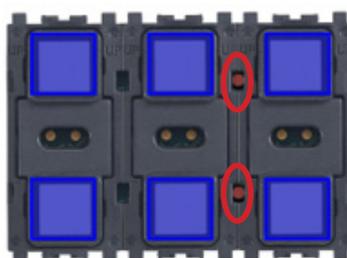
4.1 RGB LEDs

The device is equipped with 6 RGB LEDs (the colours of the LEDs are configured via a signal on input 7 or via the local programming procedure) and the symbols displayed on the cover plate 21663 can be customised using the specific labels.



4.2 Pushbuttons

When the cover plate is not fitted, the 21126 control presents six physical pushbuttons (shown in blue) and two configuration pushbuttons (shown in red).



Once the cover plate has been fitted to the control, the 6 touchscreen buttons (shown in blue) can be used independently of each other.



Device configuration

5. Device configuration

Caution: all the procedures described below must be carried out using the physical pushbuttons, and therefore without the cover plate fitted to the device.

5.1 Setting the colours of the LEDs

The colours of the LEDs can be configured in two different ways:

- via signal on input 7;
- via local programming procedure.

5.1.1 Configuration via input 7

By providing a signal at input 7 and modulating the pulse width, it is possible to configure the colours of all the LEDs, as indicated in the table below.

Modulation %	LED colour
0 - 13	Custom colour saved to memory (see paragraph 5.1.2)
14 - 27	Blue
28 - 39	Green
40 - 51	Red
52 - 63	Magenta
64 - 75	Cyan
76 - 87	Amber
88 - 100	White

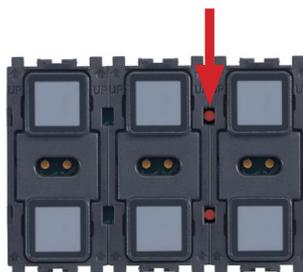
As input 7 has a read error of $\pm 3\%$ it is advisable to generate an amplitude modulation equal to the average value of the indicated intervals (for example 45% for Red).

This configuration method is useful for centralised systems where there is a requirement to change the colours of the LEDs quickly.

5.1.2 Configuration via local programming procedure

If input 7 is not activated or if the signal provided has a pulse width modulation of less than 14%, the colours of the LEDs may be set using the following procedure:

1. Long press the upper configuration button; the device will illuminate all the LEDs with the colour currently saved to memory.



At this point it is possible to modify the colour of each individual LED.

2. Short press the pushbutton for which you want to set the colour of the relative LED; each press of the pushbutton will cycle through the available colours in the sequence **Amber - Blue - Green - Red - Magenta - Cyan**.

With a long press on one of the pushbuttons, all the LEDs will cycle simultaneously through the sequence **Amber - Blue - Green - Red - Magenta - Cyan**.

3. Once all the desired colours have been selected, long press the upper configuration button to save the settings to memory.

N.B. If no operations are performed within the timeout of 10 s, the device will quit the LED configuration procedure without saving any changes made.

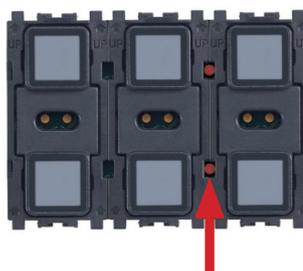
5.2 Device setup

The device setup can be configured in two ways:

- standard;
- rocker switch action for roller shutters.

5.2.1 Standard setup

1. Long press the upper configuration button; the device will illuminate all the LEDs with the colour white displaying the functions currently saved to memory.



Device configuration

The illumination of the LEDs corresponds to a precise function, as shown in the following table:

	Left module	Central module	Right module
Upper pushbutton	Always off	High sensitivity (default value)	LED brightness in standby
Lower pushbutton	Always off	Low sensitivity	LED brightness in standby

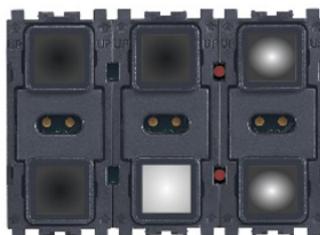
- The LEDs of the central module indicate the sensitivity of the touchscreen when the device is used in combination with a cover plate; if the upper centre LED is on, sensitivity is high, and if the lower centre LED is on, sensitivity is low.
To select the desired behaviour, simply press the relative pushbutton (the two central pushbuttons are mutually exclusive).
- The LEDs on the right module indicate the brightness of the LEDs in standby; pressing the upper right pushbutton increases the brightness, while pressing the lower right pushbutton decreases it.
The available options are: **LEDs off**, **minimum brightness (default)**, **medium brightness**, **maximum brightness**.
The brightness of the LEDs changes immediately to show the new setting.

Once all the desired options have been selected, long press the lower configuration button to save the settings to memory.

N.B. If no operations are performed within the timeout of 10 s, the device will quit the setup configuration procedure without saving any changes made.

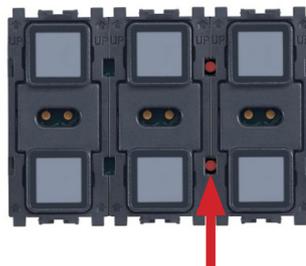
Example.

The device illustrated below is set to low sensitivity and, when in standby, the LEDs illuminate with minimum brightness.



5.2.2 Setup with rocker switch action for roller blinds

1. Long press the lower configuration button.



2. Short press the upper configuration button; the device will illuminate all the LEDs with the colour white, displaying the functions currently saved to memory.



The illumination of the LEDs corresponds to a precise function, as shown in the following table:

	Left module	Central module	Right module
Upper pushbutton	Always on	Always on	Always on
Lower pushbutton	Rocker switch operation	Rocker switch operation	Rocker switch operation

The lower LEDs indicated whether the rocker switch operation for roller blind control is enabled on the respective module; if the lower LED is illuminated, the module will act as a roller blind rocker switch, and if the LED is off, the module will operate with two independent pushbuttons.
To select the desired behaviour, simply press the relative lower pushbutton.

Once all the desired options have been selected, long press the lower configuration button to save the settings to memory.

N.B. If no operations are performed within the timeout of 10 s, the device will quit the setup configuration procedure without saving any changes made.

Short press the configuration button to return to the standard Setup phase.

Operation

5.3 Factory reset

Simultaneously long pressing all six pushbuttons resets the device to the factory settings; all other settings will be deleted.

6. Operation

The device has two operating modes:

- With load status display (feedback enabled).
- Without load status display (feedback disabled).

The operating mode is selected by activating or not activating input 8; if the input is activated, feedback is enabled, otherwise feedback is disabled.

6.1 Display of load status (feedback enabled)

This mode is useful in cases where a third-party system controls illumination of the LEDs on the 21126 control; normally the device is in standby condition.

6.1.1 Standby

The brightness level of the six LEDs is that set during the "Standard setup" procedure.

- If an input is not activated, the colour of the corresponding LED will be white.
- If the input is activated, the colour of the corresponding LED will be that set using the procedure described in para. 5.1.
- If a hand enters the proximity detection area, the device will be activated.

6.1.2 Activated

When the device is activated, output 7 is also activated and all the LEDs illuminate at maximum brightness.

- If an input is not activated, the colour of the corresponding LED will be white.
- If the input is activated, the colour of the corresponding LED will be that set using the procedure described in para. 5.1.

With independent pushbuttons

The device will activate the corresponding output for as long as the pushbutton is held pressed.

With rocker switches

The device will activate the corresponding output for as long as the pushbutton is held pressed.

A long press of the upper pushbutton activates the "Up" output (Output 1 for the left module, Output 3 for the centre module and Output 5 for the right module) and it will remain activated for 60 s or until one of the two pushbuttons is pressed again.

A long press of the lower pushbutton activates the "Down" output (Output 2 for the left module, Output 4 for the centre module and Output 6 for the right module) and it will remain activated for 60 s or until one of the two pushbuttons is pressed again.

If a change of direction is commanded when the blind is moving, both the corresponding outputs remain off for 500 ms before executing the last command to be received.

10 s after the hand is withdrawn from the proximity detection area, output 7 is deactivated and the device returns to standby.

6.2 Without display of load status (feedback disabled)

This operating mode is useful in cases where a third-party system does not control illumination of the LEDs on the 21126 control.

In this mode inputs 1 to 6 are ignored and the device is normally in standby condition.

6.2.1 Standby

The brightness level of the six LEDs is that set during the "Standard setup" procedure.

- If the input is activated, the colour of the corresponding LED will be that set using the procedure described in para. 5.1.
- If a hand enters the proximity detection area, the device will be activated.

6.2.2 Activated

When the device is activated, output 7 is also activated and all the LEDs illuminate at maximum brightness and in the colours set during the procedure described in para. 5.1.

With independent pushbuttons

The device will activate the corresponding output for as long as the pushbutton is held pressed; on releasing the pushbutton, the corresponding LED will flash.

With rocker switches

A long press of the upper pushbutton activates the "Up" output (Output 1 for the left module, Output 3 for the centre module and Output 5 for the right module) and it will remain activated for 60 s or until one of the two pushbuttons is pressed again.

A long press of the lower pushbutton activates the "Down" output (Output 2 for the left module, Output 4 for the centre module and Output 6 for the right module) and it will remain activated for 60 s or until one of the two pushbuttons is pressed again.

If a change of direction is commanded when the blind is moving, both the corresponding outputs remain off for 500 ms before executing the last command to be received.

On releasing the pushbutton, the corresponding LED will flash.

10 s after the hand is withdrawn from the proximity detection area, output 7 is deactivated and the device returns to standby.

Installation rules - Regulatory compliance

7. Installation rules

Installation should be carried out by qualified personnel in compliance with the current regulations regarding the installation of electrical equipment in the country where the products are installed.

8. Regulatory compliance

EMC Directive.
Standard EN 60669-2-1.



WEEE - Information for users

If the crossed-out bin symbol appears on the equipment or packaging, this means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste center, or return it to the retailer when purchasing a new one. Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m², if they measure less than 25 cm. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.



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